ABSTRACT

An inverted-F ferroelectric antenna is provided. The antenna comprises a counterpoise, or groundplane, and a radiator structure having a first end and a second end. A capacitor, formed from a ferroelectric dielectric is interposed between the second end of the radiator and the counterpoise. The capacitor has a variable dielectric constant, and the antenna is resonant at a frequency responsive to the dielectric constant of the capacitor ferroelectric material. Typically, the capacitor includes a dielectric formed from a fixed constant dielectric, together with a ferroelectric dielectric with a variable dielectric constant. A bias voltage feed is used to apply a voltage to the capacitor ferroelectric dielectric. The ferroelectric dielectric has a dielectric constant that varies in response to the applied voltage.